

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

**I. Listing of Claims**

1. (Currently Amended): An air induction system for inducting air into an engine of an automobile, the system comprising:

a duct in fluid communication with the engine of the automobile for directing inducted intake air into the engine; and

a compliant member connected to the duct, wherein the duct is made of a first material and the compliant member is made of a second material that flexes as a result of an internal pressure fluctuation during air induction into the engine; and

the compliant member is disposed on a quarter wave tuner of the air induction system.

2. (Original): The air induction system of claim 1 wherein the compliant member further comprises an aperture disposed along a length of the duct covered with the second material.

3. (Original): The air induction system of claim 2 wherein the second material is a thermoplastic elastomer.

4. (Original): The air induction system of claim 3 wherein the thermoplastic elastomer is an olefin/polypropylene blend.

5. (Original): The air induction system of claim 1 wherein a compliant member is located at a portion of an air inlet tube of the air induction system that allows for dissipation of one or more acoustic standing waves.

BRINKS  
HOFER  
GILSON  
& LIONE

-2-

Appl. No. 10/803,515

Attorney Docket No. 10541-1934

6. (Original): The air induction system of claim 1 wherein the first material is a polymer.

7. (Original): The air induction system of claim 1 wherein the compliant member has a thickness that is less than half of a thickness of the duct.

8. (Original): The air induction system of claim 1 wherein the aperture is an elongated slot.

9. (Original): The air induction system of claim 1 wherein the compliant member is disposed on a resonator of the air induction system.

10. (Cancel):

11. (Original): The air induction system of claim 1 wherein the compliant member is disposed on an air filter box in fluid communication with the duct of the air induction system.

12. (Currently Amended): A method for reducing noise generated in an air induction system, the method comprising:

determining a length of an air duct;

determining a location along the duct where a maximum pressure of an acoustic standing wave is present;

forming a flexible portion into a portion of the duct; and

coupling a quarter wave tuner to the duct; and

BRINKS  
HOFER  
GILSON  
BLTONE

-3-

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

positioning the flexible portion at the location of the maximum pressure of the acoustic standing wave.

13. (Original): The method of claim 12, further comprising forming the duct out of a first material.

14. (Original): The method of claim 12, further comprising forming the flexible portion out of a second material.

15. (Original): The method of claim 14, wherein forming the flexible portion out of a second material further comprises over-molding the second material over the duct.

16. (Original): The method of claim 12, wherein forming a flexible portion further comprises forming an aperture in the portion of the duct.

17. (Original): The method of claim 16, wherein forming a flexible portion further comprises covering the aperture with a thin layer of a polymer material.

18. (Original): The method of claim 16, wherein forming a flexible portion further comprises covering the aperture with a thin layer of an olefin/polypropylene blend.

19. (Original): The method of claim 12, wherein forming further comprises fixing the thin layer of polymer material to the duct over the aperture.

BRINKS  
HOFFER  
GILSON  
& LIONE

-4-

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

20. (New): An air induction system for inducing air into an engine of an automobile, the system comprising:

a duct in fluid communication with the engine of the automobile for directing inducted intake air into the engine; and

a compliant member connected to the duct, wherein the duct is made of a first material and the compliant member is made of a second material that flexes as a result of an internal pressure fluctuation during air induction into the engine; and

the compliant member has a thickness that is less than half of a thickness of the duct.

21. (New): The air induction system of claim 1 wherein the compliant member further comprises an aperture disposed along a length of the duct covered with the second material.

22. (New): The air induction system of claim 2 wherein the second material is a thermoplastic elastomer.

23. (New): The air induction system of claim 3 wherein the thermoplastic elastomer is an olefin/polypropylene blend.

24. (New): The air induction system of claim 1 wherein a compliant member is located at a portion of an air inlet tube of the air induction system that allows for dissipation of one or more acoustic standing waves.

BRINKS  
HOFFER  
GILSON  
ALIONE

-5-

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

25. (New): The air induction system of claim 1 wherein the first material is a polymer.

26. (New): The air induction system of claim 20 wherein the aperture is an elongated slot.

27. (New): The air induction system of claim 20 wherein the compliant member is disposed on a resonator of the air induction system.

28. (New): The air induction system of claim 20 wherein the compliant member is disposed on a quarter wave tuner of the air induction system.

29. (New): The air induction system of claim 20 wherein the compliant member is disposed on an air filter box in fluid communication with the duct of the air induction system.

30. (New): A method for reducing noise generated in an air induction system, the method comprising:

determining a length of an air duct;

determining a location along the duct where a maximum pressure of an acoustic standing wave is present;

forming a flexible portion into a portion of the duct, wherein the flexible portion has a thickness less than half the thickness of the duct; and

positioning the flexible portion at the location of the maximum pressure of the acoustic standing wave.

BRINKS  
HOFFER  
GILSON  
ALIONE

-6-

Appln. No. 10/803,515

Attorney Docket No. 10541-1934

31. (New): The method of claim 30, further comprising forming the duct out of a first material.

32. (New): The method of claim 30, further comprising forming the flexible portion out of a second material.

33. (New): The method of claim 32, wherein forming the flexible portion out of a second material further comprises over-molding the second material over the duct.

34. (New): The method of claim 30, wherein forming a flexible portion further comprises forming an aperture in the portion of the duct.

35. (New): The method of claim 34, wherein forming a flexible portion further comprises covering the aperture with a thin layer of a polymer material.

36. (New): The method of claim 34, wherein forming a flexible portion further comprises covering the aperture with a thin layer of an olefin/polypropylene blend.

37. (New): The method of claim 30, wherein forming further comprises fixing the thin layer of polymer material to the duct over the aperture.

BRINKS  
HOFER  
GILSON  
BLTONE

-7-